A 52-Year-Old Woman with a Subcapsular Liver Hematoma

(See pages 1137 for the Photo Quiz.)

Diagnosis: Fascioliasis complicated with subcapsular liver hematoma.

This case illustrates an uncommon clinical presentation of acute fascioliasis subcapsular liver hematoma. The diagnosis was suspected on the basis of the patient’s residence, history of exposure, and marked eosinophilia by abdominal computed tomography (CT) scan, and it was confirmed by observing eggs of *Fasciola hepatica* in the stools (Figure 2) and by positive serology results with the Fas2 enzyme-linked immunosorbent assay (ELISA).

Fascioliasis is a food-borne transmitted zoonosis caused by the liver trematode *F. hepatica* or less frequently by *Fasciola gigantica* [1]. Certain areas of the globe are considered highly endemic, including Central and South America, Asia, Western Europe, Africa, and the Middle East. Two South American countries report the highest prevalence rates in the world, Bolivia and the Andean areas of Peru [1, 2]. Interestingly, women in these endemic areas disclose higher attack rates and develop more liver and biliary complications than males [1]. Fascioliasis in developed countries occurs mostly among immigrants; delay in diagnosis is a common feature in these patients [2]. Humans get the infection by eating raw vegetables or less commonly by drinking contaminated water infested with metacercaria, the human infective larval stage of the parasite. Eating watercress (46%), lettuce (32%), alfalfa (11%), or spinach (5%) and drinking water from natural ponds (11%) and beverages made from alfalfa (5%) were associated with transmission in a study that involved 277 patients in Lima, Peru [3].

Understanding the life cycle helps to explain the clinical manifestations of disease, including unusual complications such as subcapsular liver hematoma [1, 2]. Ingested metacercaria penetrate the small intestine and migrate into the peritoneum on the way to the liver, the so-called acute stage, which usually takes 3 to 5 months. Final maturation to the adult hermaphrodite form is attained in the biliary tract after approximately 3 to 5 months. Adults can live for years in the biliary tree (the so-called chronic stage), shedding eggs intermittently to the environment where specific snails, the intermediate hosts, are needed to complete the life cycle. Abdominal pain and eosinophilia are the hallmarks of the acute stage. The chronic stage is usually asymptomatic or mildly symptomatic, but mechanical obstruction of the biliary tract by the adult parasite may ensue, resulting in cholangitis and potentially more serious complications, including liver abscesses. Less common clinical manifestations may result from aberrant migration of the larvae to the skin, pleura, lungs, central nervous system, and potentially other organs [1, 2].

An unusual manifestation of fascioliasis is subcapsular liver hematoma, which presumably results from the destruction of blood vessels during the intrahepatic migration of the immature parasites. Few reports of this complication have been published in the medical literature [4–9]. The actual prevalence of this condition is unknown, largely because it is not regularly sought. A recent evaluation of 10 Peruvian patients with acute massive fascioliasis documented subcapsular liver hematomas in 2 of them [5]. In that study, the authors performed abdominal CT scan and/or magnetic resonance imaging in all their patients and documented a number of previously unreported radiologic findings that correlated with disease duration. Hypodense nonenhancing images located between the capsule and the parenchyma that usually do not modify the liver surface, with or without irregular internal densities, are characteristic findings of subcapsular liver hematoma on the abdominal CT scan (Figure 1) [7].

Diagnosis of fascioliasis in the acute phase is facilitated now with the advent of more sensitive and more specific serologic methods, including the Fas2 ELISA [10]. Identification of eggs in stool samples remains the gold standard for diagnosing the chronic phase and can
be performed using rapid sedimentation techniques [1]. The treatment of choice for fascioliasis is triclabendazole [11]. A single-dose regimen is curative in approximately 83% of patients, and a 2-dose regimen increases cure rates to 94% [12]. Relief of symptoms occurs rapidly, and clearance of the eosinophilia is obtained in ~6 weeks. Surgical drainage of the subcapsular hematoma may be needed [4, 6, 7]. The magnitude of the hematoma, presence of hemodynamic instability, and uncertainties about the diagnosis were indications for surgery in these cases. Our case was managed medically with 2 consecutive doses of triclabendazole, attaining resolution of symptoms in a few days and disappearance of eosinophilia in 7 days.

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Figure 1. Contrast-enhanced abdominal computed tomography scan showing a large subcapsular liver hematoma occupying segments VI and VII of the liver (long arrow) and several hypodense tracts reflecting the migratory pathway of the larvae (short arrow).

Figure 2. Oval-shaped egg of Fasciola hepatica showing characteristic features, including a barely distinct operculum (arrow head), a thin shell that is slightly thicker at the abopercular end (short arrow), and a granular content inside (long arrow).